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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,390	12/22/2000	Naomi Nishiki	2000_1751A	8729

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EXAMINER

DONG, DALEI

ART UNIT PAPER NUMBER

2875

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,390

Applicant(s)

NISHIKI ET AL.

Examiner

Dalei Dong

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 22 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 22 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. 09/742,390.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, the phrase "approximately" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,106,353 to Kimura.

Regarding to claims 1-7, Kimura discloses in Figure 1(a) "a process in which the shadow mask is set. The shadow mask 1 is an example of the slot-type one-dimensional tension type shadow mask. Furthermore, the mask frame 2 is a rectangular frame. Upper

and lower long side frames 2a and 2b are respectively fixed to right and left of short side frames 2c and 2d so as to form the mask frame 2" (column 5, line 3-8).

Kimura also discloses in Figure 3, "in this process, the holding device 3 shown in FIG. 3 holds the shadow mask 1 and positions the shadow mask 1 with respect to the mask frame 2. This positioning is carried out by putting a projection provided on the holding device 3 into a hole or a notch provide don the shadow mask 1" (column 5, line 9-13).

Kimura further discloses in Figure 1(a), "Wrinkles and sagging are removed from the shadow mask by sufficiently stretching the shadow mask 1 in the outward direction with respect to its center while holding the shadow mask 1 in a curved shape. The direction in which the shadow mask is stretched may be only in the stretched direction (the direction shown by the arrow a of FIG. 1(a)) or in a direction diagonal to the shadow mask 1 (the direction shown by the arrow c of FIG. 1(a)) or in both directions. In this case, the shadow mask 1 is stretched by moving the holding device 3 in the direction in which the shadow mask 1 is stretched or by sliding the magnet pieces located on the four corners of the shadow mask 1 in the radial direction" (column 5, line 25-35).

Kimura further yet discloses, "according to the methods, the shadow mask 1 can be fixed in a state in which the shadow mask is stretched on the mask frame 2. With such a method, since a tension force can be applied without wrinkles generated on the shadow mask 1 in the next process, nonuniformity in stress occurring on the shadow mask after welding, thus causing the generation of wrinkles, can be prevented" (column 5, line 36-43).

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Kimura discloses the claimed invention except for a tension force of an strength of 9.8 to 490 N. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have chosen a tension force of an strength of 9.8 to 490 N, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

However, Kimura does not disclose the through holes provided on a perforation region. Lee teaches in Figure 5, the edge portion of the tensioned mask 6 is formed with a bored portion 6e having a plurality of holes 6d. In this structure, when the glass frame 8 is formed, the glass solution for forming the glass frame 8 fills up the holes 6d so that the tensioned mask 6 can be rigidly secured to the glass frame 8" (column 3, line 36-41).

Lee discloses the claimed invention except for holes of a diameter of 3 to 8 mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have chosen a hole of a diameter of 3 to 8 mm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilize the holes of Lee for the construction of the shadow mask of Kimura in order to eliminate wrinkles and nonuniformity in the shadow mask.

Conclusion

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following prior art are cited to further show the state of the art of composition of a shadow mask.

U.S. Patent No. 4,828,523 to Fendley.

U.S. Patent No. 4,964,828 to Patt.

U.S. Patent No. 5,274,301 to Takahashi.

U.S. Patent No. 5,702,280 to Horiuchi.


U.S. Patent No. 6,025,676 to Ohama.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalei Dong whose telephone number is (703)308-2870. The examiner can normally be reached on 8 A.M. to 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703)305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9318 for regular communications and (703)872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

D.D.
March 6, 2003


Sandra O'Shea
Supervisor, Machine Examination
Technology Center 2000